

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-35-2
Relating to Certification of New Off-Road Compression-Ignition Engines

MITSUBISHI HEAVY INDUSTRIES, LTD.

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment:

Model Year: 2001

Typical Equipment Usage: Tractor, Generator and Other Industrial Equipment

Fuel Type: Diesel

<u>Engine Family</u>	Engine Displacement (liters)	Useful Life (hours)	Emission Control Systems and Special Features
1MVXL01.0BBB (L2E)	0.6, 0.8 and 1.0	3000	Indirect Diesel Injection

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values for hydrocarbons (HC), oxides of nitrogen (NO_x), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NO_x), carbon monoxide (CO), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

Engine Power Rating (kw)	Emission Standard Category	Standard Certification	Exhaust Emissions (g/kw-hr)					Smoke Opacity (%)		
			HC	NO _x	NMHC+NO _x	CO	PM	Accel	Lug	Peak
8≤KW<19	Tier 1		N/A	N/A	9.5	6.6	0.80	20	15	50
			--	--	4.9	2.2	0.43	4	4	6

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels— 1996 and Later Off-Road Compression-Ignition Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 and 2426).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 14th day of February 2001.

A handwritten signature in black ink, appearing to read "R. B. Summerfield", is written over a horizontal line.

R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Process Code: **New Submission**

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1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
L3E-Y162WM	L3E	25.1@3600	20.9	12.4	41.2@2200	20.1	7.52	EM
L3E-W261DG	L3E	12.5@1800	17.6					EM
L3E-W261LG	L3E	12.5@1800	17.6					EM
L3E-W262SD	L3E	12.5@1800	17.6					EM
L3E-W261CG	L3E	12.5@1800	17.6					EM
L3E-W263ESA	L3E	15.4@2200	17.6					EM
L3E-W262KL	L3E	17.4@2400	18.2					EM
L3E-W261TG	L3E	19.7@3000	18.0					EM
L3E-W261DPH	L3E	23.8@3600	20.0					EM
L3E-W261DPH	L3E	23.8@3600	20.0					EM
L3E-W261LPH	L3E	23.8@3600	20.0					EM
L3E-W261WM	L3E	13.0@1800	18.7					EM
L3E2-W262TG	L3E	20.7@3300	17.9					IDI EM
L2E-W262WM	L2E	16.7@3600	21.4	8.47	27.5@2400	20.7	5.45	EM
L2E-W262WM	L2E	15.2@3600	19.4					EM
L3C-W263WM	L3C	11.0@1800	15.9					EM
L2E-W261DPH	L2E	15.2@3600	17.6					EM
L2E-W261DPH	L2E	15.2@3600	17.6					EM
L2E-W261LPH	L2E	15.2@3600	17.6					EM
L2E-W262SDH	L2E	15.2@3600	17.6					EM
L3E-W261DW	L3E	17.3@2300	19.0	7.2	41.2@2000	20.1	6.7	EM
L3E-W231NSA	L3E	17.4@2400	18.2					EM